Acer HomePlug USB Adapter

User’s Manual

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Certificate No: C432409-01

CERTIFICATE

EQUIPMENT : Acer Home Plug USB
MODEL NO. : HP-USB-01
APPLICANT : **Acer Computer GmbH**
Kornkamp 4,22926 Ahrensburg, Germany

I HEREBY **CERTIFY THAT:**

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN **EUROPEAN COUNCIL DIRECTIVE 89/336/EEC.** THE EQUIPMENT WAS **PASSED** THE TEST PERFORMED ACCORDING TO **European Standard EN 55022:1998 Class B, EN 61000-3-2:2000, EN 61000-3-3:1995/A1:2001 and EN 55024:1998/A1:2001 (IEC 61000-4-2:1995, IEC 61000-4-3:1995, IEC 61000-4-4:1995, IEC 61000-4-5:1995, IEC 61000-4-6:1996, IEC 61000-4-8:1993, IEC 61000-4-11:1994).** THE TEST WAS CARRIED OUT ON **Apr. 20, 2004** AT **SPORTON INTERNATIONAL INC.** LAB.

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0.0 Introduction to HomePlug Networking

0.1 Understanding HomePlug Networking Concept

HomePlug Networking, not to be confused with Power over Ethernet, has very different usage and features. Power over Ethernet is a device that acts as a Hub or a Switch and draws its power from nearby unsuspecting computers connected to it by a Cat. 5 cable. On the other hand, HomePlug Networking uses your current existing or featured power lines to transfer network data. There are existing technologies that are similar to HomePlug, such as X10 or HPNA; however, HomePlug can reach speeds of up to 14Mbps

HomePlug works simply by connecting a device to two computers in two locations, respectively, inside a house or building and plugging them into a wall outlet. Now you have a network connecting two computers. In addition, you can replace the computers with switches so that you are connecting networks instead of computers. The process is completed within minutes with no additional cables running everywhere and without painful cable pulling in the walls or behind closets.

The technology behind the real working mechanism remains classified. Hopefully in the future, more people will have a better understanding of HomePlug.

0.2 Understanding Encryption and Security

Encryption is a method of security used to prevent intruders or unwanted access from within or outside of your network. Encryption works by using a string of letters and/or numbers as keys to encode your data. Any computer will need to know the encryption key in order to access the data. Although the data may be exposed to all environments, encryption will still protect your data from threats.

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HomePlug Encryption and Protection Schemes

The HomePlug device uses encryption to block outside access. The key is set by using the configuration software on the CD. By default, the protection is enabled. However, it is recommended that you change the default encryption key. All your HomePlug devices must use the same encryption key in order for the computers to be networked. Make sure that all devices are loaded with the same key.

0.3 Basic Requirements

- At least 2 HomePlug devices
- Available USB port for each computer
- Available empty power outlet
- Standard home power line wiring
- CD-ROM drive

0.4 Limitations of Current HomePlug Technology and What's Ahead.

The current technology and firmware of HomePlug have the following limitations as of Spring, 2002. The range of a HomePlug device reaches up to 900 feet under the same power grid or power transformer. The connection cannot pass through any UPS (Uninterruptible Power Supply). There is also a limitation to the number of HomePlug Ethernet Bridges. Because of how IP Packets and buffer zones were designed, there can only be two HomePlug Ethernet Bridges on the same HomePlug network at all times. However, there can be an unlimited number of nodes present on the network, technically speaking.

0.5 Nodes and Bridges

There is a difference between Nodes and Bridges. A Node is any device that resides in or is connected directly onto an existing network. A computer with a network card connected to a switch is a Node. A Mac connected to a hub is also a Node. A Bridge is used when connecting one type or group of networks with another type or group of networks. Connecting every computer from one network with another network would result in a mess of cables, so instead, a bridge is brought in to have a single connection between the networks instead of many. A Bridge in HomePlug terms functions like a concentration device that connects multiple computers onto the HomePlug network using one HomePlug device.

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The Bridge function only works with Ethernet HomePlug models because USB devices can't be shared yet. The default connection type for Ethernet adapters is Bridge. The only way to turn it off is to install the utility that comes with the unit. That will turn the Bridge into a Node.

It is possible to have both Nodes and Bridges on a network as long as there is only a maximum of two Bridges. It is possible to have USB Nodes on the same network as Ethernet Nodes.

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1.0 Installation

- Acer HomePlug USB Adapter

Make sure that your HomePlug USB Wall Adapter is not plugged in when beginning.

Insert the installation CD. If the CD does not automatically load, run (CD Drive Latter):\usb\setup.exe

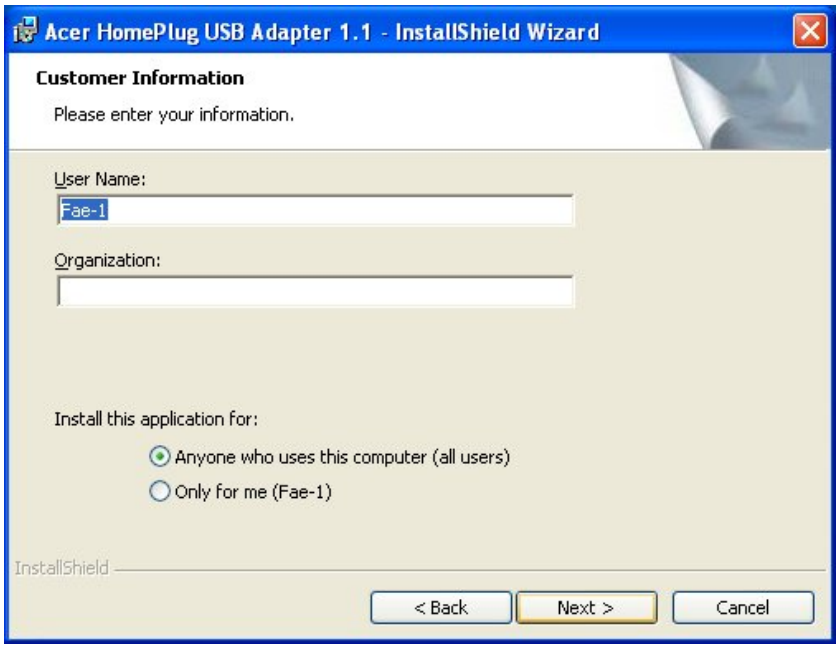
Click on **Next** to start installation.

Acer HomePlug USB Adapter 1.1 - InstallShield Wizard
Welcome to the InstallShield Wizard for Acer HomePlug USB Adapter 1.1
The InstallShield(R) Wizard will install Acer HomePlug USB Adapter 1.1 on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
< Back
Next >
Cancel

Enter a username and organization and continue installation.

(Username and Organization have no importance in device operation.)

Click **Next.**



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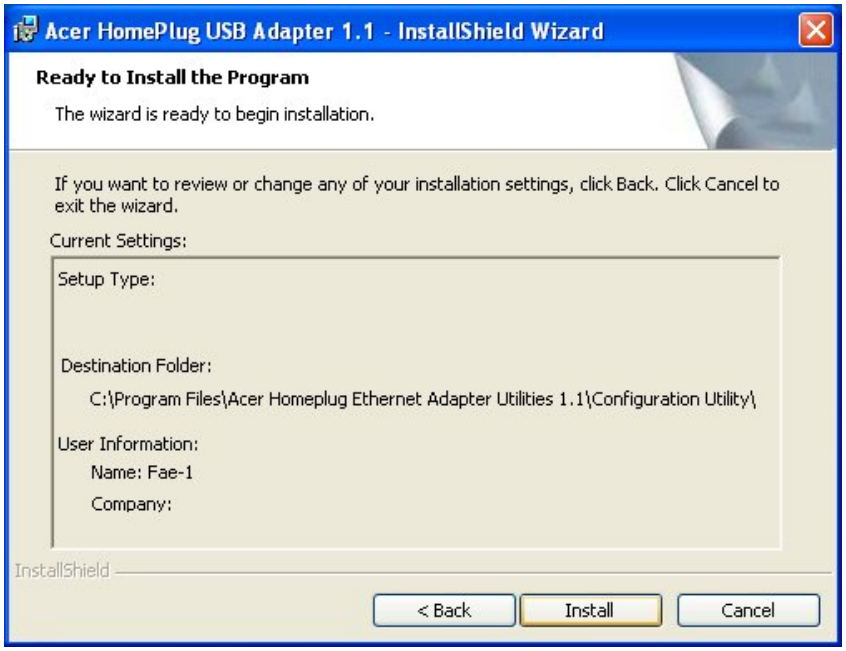
Click **Install**.


Acer HomePlug USB Adapter 1.1 - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Current Settings:
Setup Type:
Destination Folder:
C:\Program Files\Acer Homeplug Ethernet Adapter Utilities 1.1\Configuration Utility\
User Information:
Name: Fae-1
Company:
InstallShield
< Back
Install
Cancel

Click **Finish.**

Acer HomePlug USB Adapter 1.1 - InstallShield Wizard
InstallShield Wizard Completed
The InstallShield Wizard has successfully installed Acer HomePlug USB Adapter 1.1. Click Finish to exit the wizard.
< Back
Finish
Cancel

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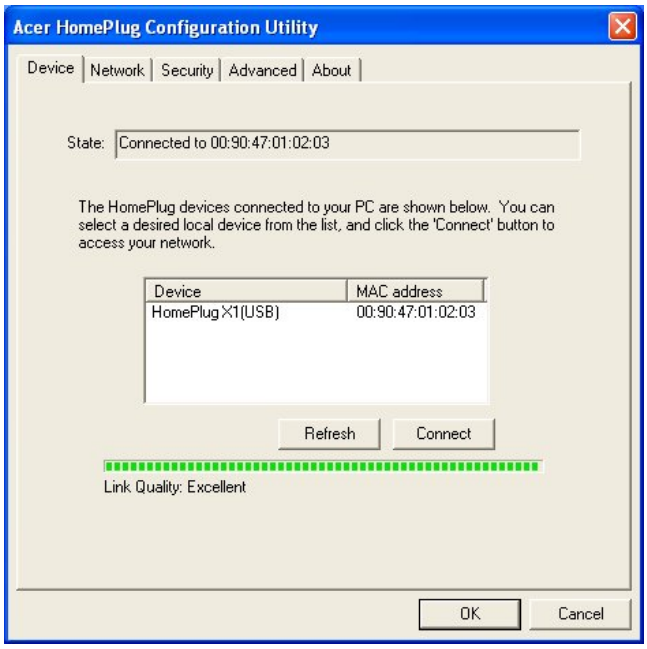
2.0 Configuration

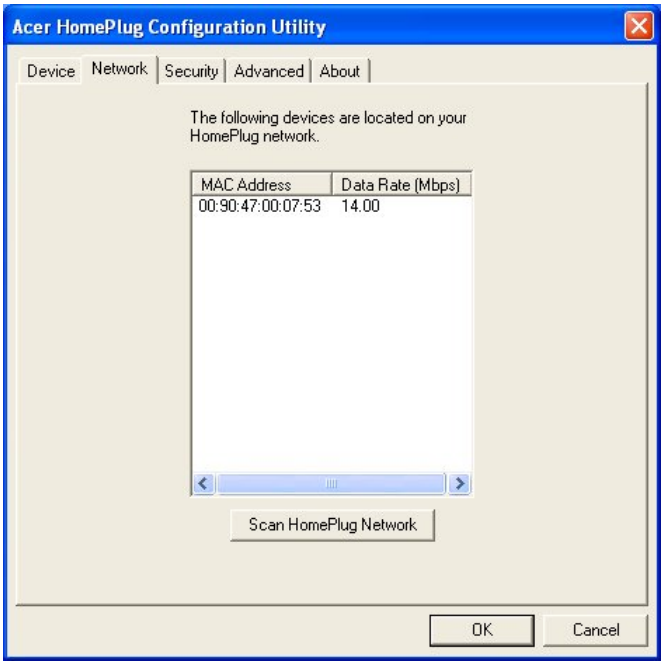
With the HomePlug Configuration Utility you will be able to configure and obtain status on your homeplug network. Just launch the Newly created Shortcut on your desktop.



Device– On this window, the utility will try to detect what HomePlug devices are connected. Your HomePlug Mac Address will be shown here.

Refresh– Click on it when you need to refresh your information.

Connect– When you have more than one HomePlug device, you can select which device you want to connect to. Highlight the device and press Connect.



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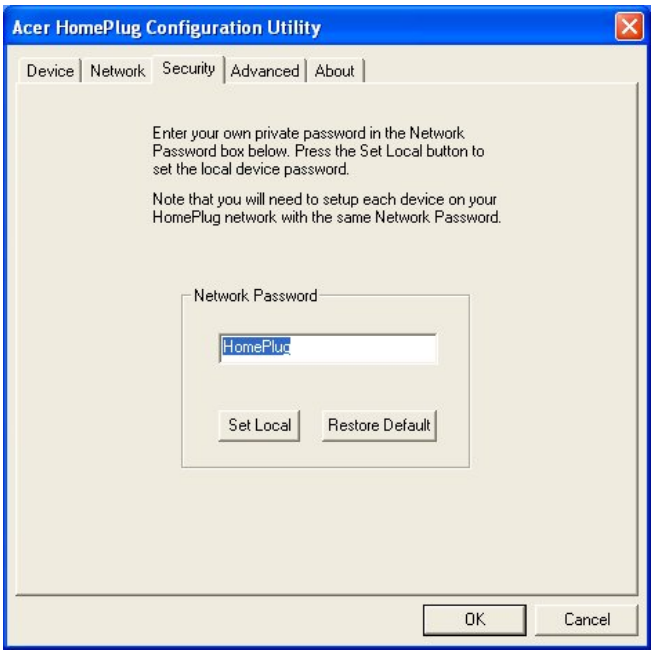
Network– This tab will show all HomePlug devices connected to the network. Scan the network for newly added devices.

MacAddress– The device ID or MacAddress is displayed on the tab to identify the unit.

Data Rate– Shows the speed that this device is connected at. This data will vary depending on the Powerline quality.


Acer HomePlug Configuration Utility
Device
Network
Security
Advanced
About
Enter your own private password in the Network Password box below. Press the Set Local button to set the local device password.
Note that you will need to setup each device on your HomePlug network with the same Network Password.
Network Password
HomePlug
Set Local
Restore Default
OK
Cancel

Security– Allows the user to change the encryption setting on the HomePlug device.

Set Local– Enter the password into the Network Password Box and click on Set Local. This will change the password to the local device only. Only devices attached to the unit will have the new Password.

**** The Password is Case sensitive. This password must be the same on all HomePlug devices.***

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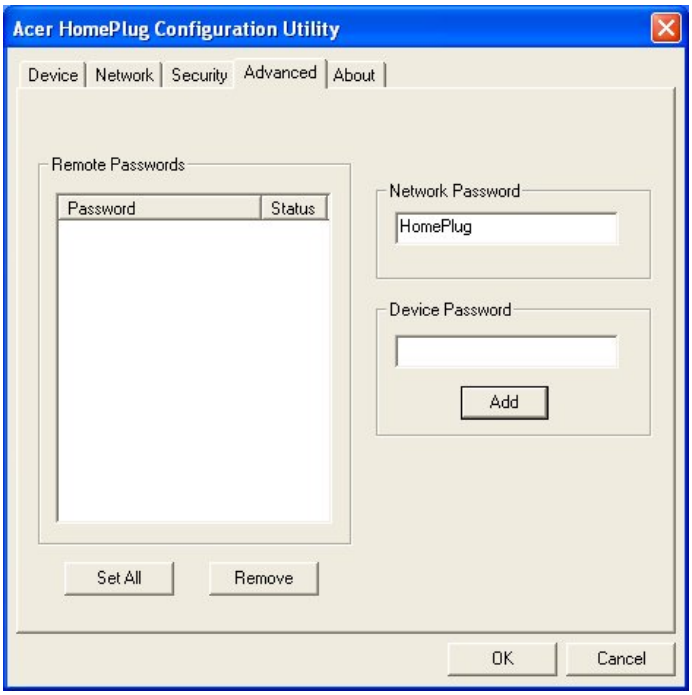
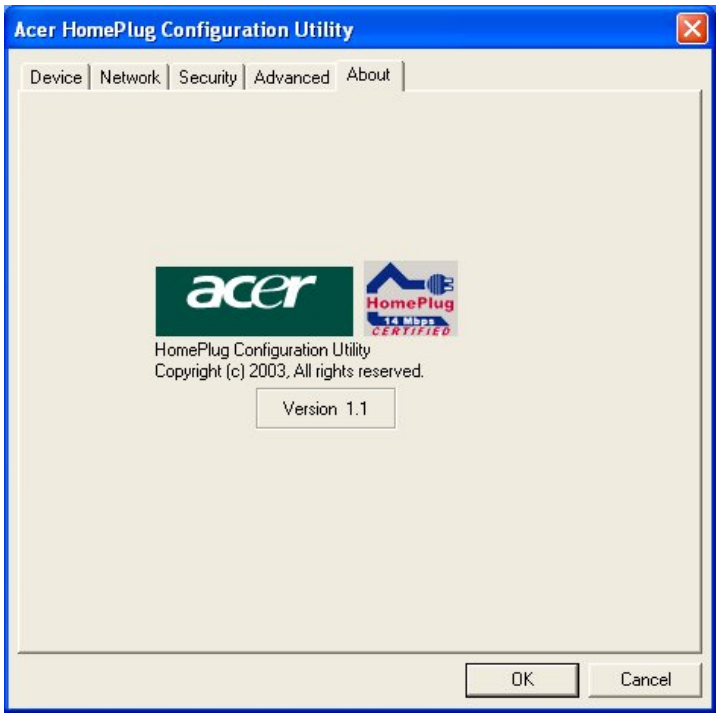


Advanced– Here users can do remote Password changes.

**** Device Password (DEK)is always taped on the bottom of the HomePlug unit.***



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